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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,646	11/21/2003	Takefumi Okumura	500.42907PX1	9131

20457 7590 05/01/2007  
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EXAMINER
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WEINER, LAURA S

ART UNIT	PAPER NUMBER
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1745

MAIL DATE	DELIVERY MODE
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05/01/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/717,646

Applicant(s)

OKUMURA ET AL.

Examiner

Laura S. Weiner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 3-5-07 have been fully considered but they are not persuasive. The rejection of claims 1-2, 7-8 remain rejected under 35 U.S.C. 102(a) as being anticipated by Yokoyama et al. (JP 2002-348323, translation and abstract) or Yokoyama et al. (WO 03/031453, abstract) because Yokoyama et al. ('323) teaches the claimed invention when  $n=1-4$  in the formula  $XO(AO)_nH$  and Yokoyama et al. ('453) teaches the claimed invention when  $p=1-4$  in the formula  $B-[O(AO)_p-Y]_3$ . The rejection of claims 1-10 remain rejected under 35 U.S.C. 102(e) as being anticipated by Yokahama et al. (6,833,220) because Yokahama et al. teaches the claimed invention when  $l=1-4$ . The rejection of claims 1-2 remain rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 6, 9, 11, 13 of U.S. Patent No. 6,998,465 because when  $n=1-4$  in the formula  $X-[O(AO)_n-H]_a$ .

The rejection of claims 1-2, 7-8 under 35 U.S.C. 102(b) as being anticipated by Nishiura et al. (EP 1 160 268) has been withdrawn.

### ***Claim Rejections - 35 USC § 102***

2. Claims 1-2, 7-8, 11-21 are rejected under 35 U.S.C. 102(a) as being anticipated by Yokoyama et al. (JP 2002-348323, translation and abstract) or Yokoyama et al. (WO 03/031453, abstract).

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Yokoyama et al. ('323) teaches a polymerizable compound with high conductivity which is useful as a material for electrochemical devices such as secondary battery and used in an electrolyte. The polymerizable borate compound is obtained by esterification of a polymerizable compound represented by Formula (1)  $XO(AO)_nH$ , where X is an acryloyl group or a methacryloyl group; AO is a 2-4 C oxyalkylene group and  $n=1-100$  [*claimed invention when  $n=1-4$* ] with boric acid or boric acid anhydride. Yokoyama et al. teaches on page 5, [0024] of the translation that the salts can be  $LiClO_4$ ,  $LiAsF_6$ ,  $LiPF_6$ ,  $LiBF_4$ , etc.

Yokoyama et al. ('453) teaches a secondary battery employing an electrolyte comprising a boric ester compound which comprises reacting a compound represented by Formula (1) with a boron compound represented by formula (2). In formula (1) the X group can be an acryloyl or a methacryloyl. Yokoyama et al. teaches on page 24 of the patent that the salts can be  $LiClO_4$ ,  $LiAsF_6$ ,  $LiPF_6$ ,  $LiBF_4$ , etc.

3. Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Yokahama et al. (6,833,220).

Yokoyama et al. teaches a secondary battery comprising an electrolyte comprising an ionic compound and an organic polymer compound wherein the organic polymer compound comprises a boric acid ester compound obtained by the esterification of the compound represented by Formula (1) with boric acid or boric anhydride. Yokoyama et al. teaches in column 34, an electrolyte for a battery comprising Formula (2)  $Z_2-[(A_2O)_m-R_2]_b$  where  $R_2$  represents a group represented by Formula (3).

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Yokoyama et al. also teaches in columns 33-34, claim 1 and 7, an electrolyte for a battery comprising Formula (1)  $Z1-[(A1O)I-R1]_a$  where  $I=0-600$  [teaches the claimed invention when  $I=1-4$ ] and further comprises a polymerization product of the compound of Formula 4 where  $R5$  represents a group represented by Formula (5). Yokoyama et al. teaches in column 11, that the salts can be  $LiClO_4$ ,  $LiAsF_6$ ,  $LiPF_6$ ,  $LiBF_4$ , etc.

### ***Double Patenting***

4. Claims 1-2 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 6, 9, 11, 13 of U.S. Patent No. 6,998,465. Although the conflicting claims are not identical, they are not patentably distinct from each other because U.S. Patent No. 6,998,465 claims a secondary battery comprising an electrolyte comprising a boric acid ester compound obtainable by esterifying the compound of formula (1) with a boron-containing compound of Formula (2). US Patent No. 6,998,465 claims when  $n=1-4$  in the formula  $X-[O(AO)_n-H]_a$

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

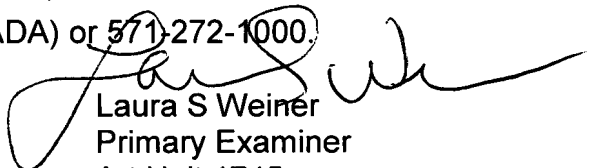
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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is 571-272-1294. The examiner can normally be reached on M-F (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Laura S Weiner  
Primary Examiner  
Art Unit 1745

April 25, 2007